

2/26/1923

RELIANCE-GRANT
Ball Bearing Door Hanger Co.
ELEVATOR EQUIPMENT CORP.

101 PARK AVENUE

NEW YORK CITY

*280-284 Starr St.
Brooklyn*

1920 SEE PRICE LIST #21

REPRESENTED BY

Specifications and Construction Details
of
RELIANCE

Ball Bearing Door Hangers, Locks,
Elevator Door Controllers, and
other Elevator Accessories

MANUFACTURED BY THE
RELIANCE BALL BEARING DOOR HANGER CO.



RELIANCE-GRANT ELEVATOR EQUIPMENT CORPORATION

101 PARK AVENUE

AGENTS IN ALL LARGE CITIES

NEW YORK, N. Y.

Introduction

OUR line consists of Ball Bearing Door Hangers (for every purpose), Elevator Door Locks, Elevator Door Controllers and other Elevator Accessories, also Ball Bearing Drawer Slides.

BALL BEARING DOOR HANGERS

The Reliance-Grant line of Ball Bearing Door Hangers is fully protected by patents, and embraces practically every kind of a ball bearing hanger required in moving doors by slide movement.

The principle of moving weights on steel balls running in grooved tracks is admittedly superior to other mechanical methods employed in door hanger construction. Reliance hangers have been on the market for 17 years, and in that time have built up a record of durability, ease of action, speed, and other essential door hanger requirements that have made them absolutely necessary on all jobs where the very best is required.

Detail drawings of our various types of hangers are shown further on in this bulletin, so that it is unnecessary to describe them extensively here.

It should be borne in mind, however, that Reliance Hangers have won their reputation on their record of performance, and that there is hardly a job today, calling for first class door hangers, where ours are not specified.

CONSTRUCTION OF HANGERS

Reliance Hangers are made either of drawn steel with rolled grooves, or else of milled steel. In all cases there are at least two tracks or ballraces, one at the top and one at the bottom with the balls fitted in between. These double races prevent any jumping or pounding of the doors.

INSTALLATION

Door Hangers should be put up perfectly plumb and level and securely fastened by means of the screws furnished. Be sure that all of the screw holes are used as they are put in for a good reason. After the hanger is in place the screws should be set so that they cannot back out.

The attachment to the door is a very simple matter. For wood or kalamein doors, knees or plates are furnished which are fastened to the doors by wood screws. These connections are tapped to receive the end of the hanger bolt. After this the hanger bolt is either hung on to the stud provided on the hanger if it is of the eye bolt type; or the square head is passed through the slot in the strap if of this type. The lock nuts are then put in place and securely locked by upsetting the thread. Care should be taken to have the door perfectly plumb. Hollow steel doors should have 1/2-inch reinforcing as shown in end sections, and then these, as well as Iron Doors, drilled and tapped to receive bolts.

ILLUSTRATION

When using the illustrations in the following pages please note that all of these sizes are based on the light weight doors as specified in the price list accompanying the same. For heavier doors the sizes of the hangers will vary with the weight. The conditions shown are only a few suggestions as to the best manner of securing a good installation job. Good fastenings should be provided in at least four locations as shown in the shaft elevations.

HANGERS SHOULD NOT BE SECURED TO BRICK, TERRA-COTTA OR CONCRETE WITH EXPANSION BOLTS, BUT SHOULD HAVE STEEL OR WOOD BACKING.

In pages following the hangers, will be found ELEVATOR DOOR LOCKS, DOOR CONTROLLERS, DRAWER SLIDES and other articles of interest to those installing or operating elevators.

In Ordering

PLEASE state actual width of door to be moved (not the opening), thickness of door and approximate weight; whether of wood, iron or kalamein, as we furnish knees or plates for connecting to wood or kalamein doors.

If "Double Speed" hangers, state which way doors close looking from inside elevator car. If doors slide into POCKETS, please mention it.

TYPE REQUIRED

When any particular device is wanted, specify by the letter enclosed in quotation marks, in the description of the device under the cut.

FINISH

All hangers are painted black unless otherwise ordered. Can be sent without paint if customer desires, in order that they may be colored to match other work.

BUMPERS

All doors should be STOPPED with rubber Bumpers. The hanger should not act in this capacity as it is not made for this.

Old buildings equipped with our device by skilled mechanics.

CAUTION

After hangers are installed, see that all grooves in tracks are wiped out perfectly clean and oil placed in them of a vaseline nature, enough to thoroughly lubricate same. At no time should hangers be used when dirty and not properly oiled. Give your hangers a little care and attention, the same as you would any other piece of machinery. It is worth the trouble.

Send for Reference List.

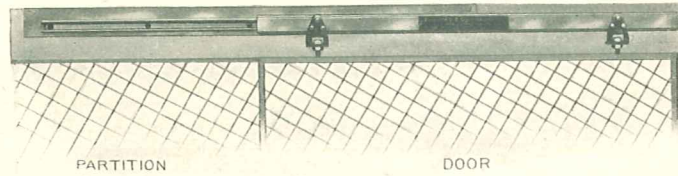
TERMS

F. O. B. New York. Cash 30 days.

Prices subject to change on 30 days' notice.

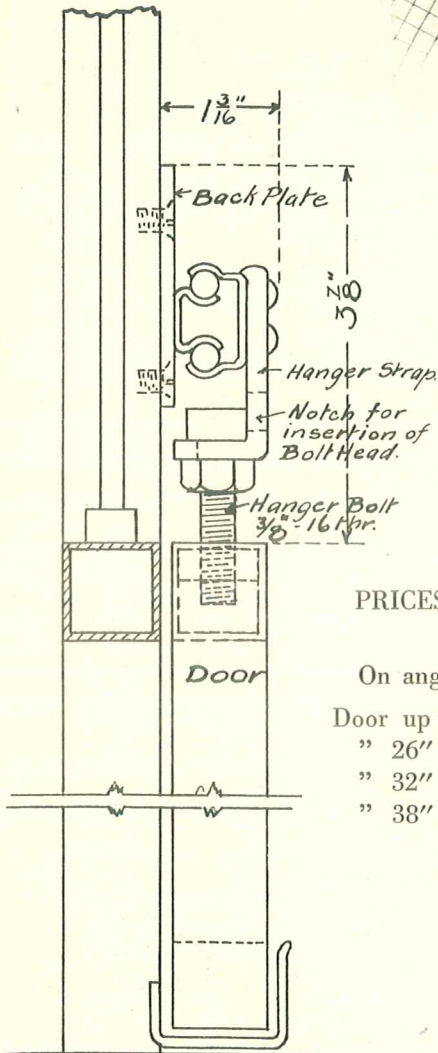
The prices quoted are on Standard Sizes and Weights, on any unusual conditions we will be pleased to have our engineering department consult with you upon, and furnish estimates and drawings.

DRAWN METAL HANGER STYLE "G" FOR SINGLE DOORS



PARTITION

DOOR

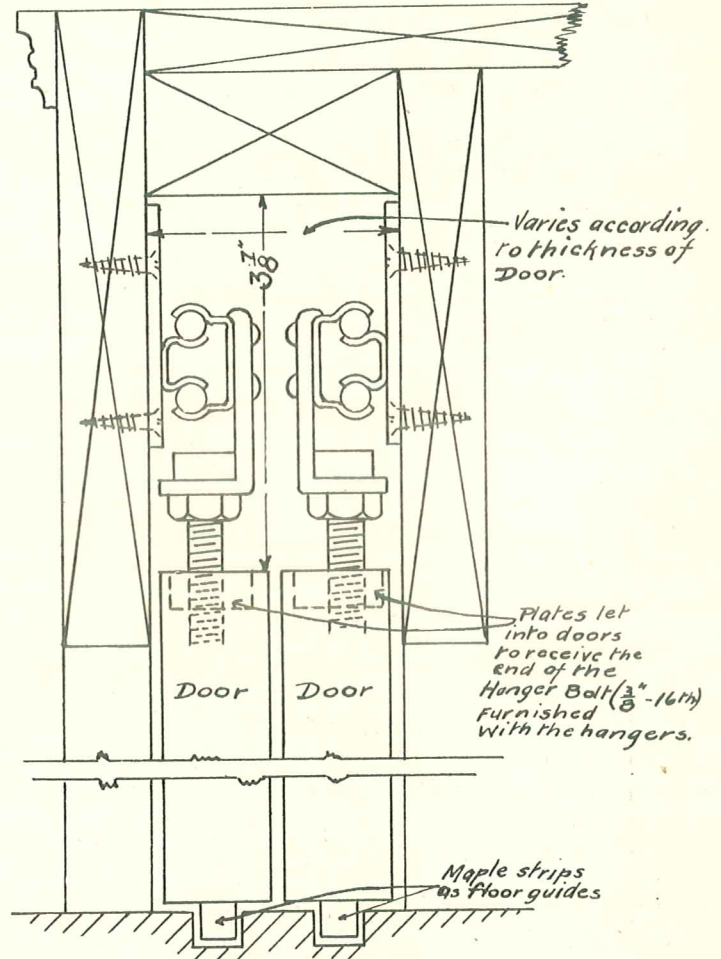


PRICES RELIANCE HANGERS

Style "G"

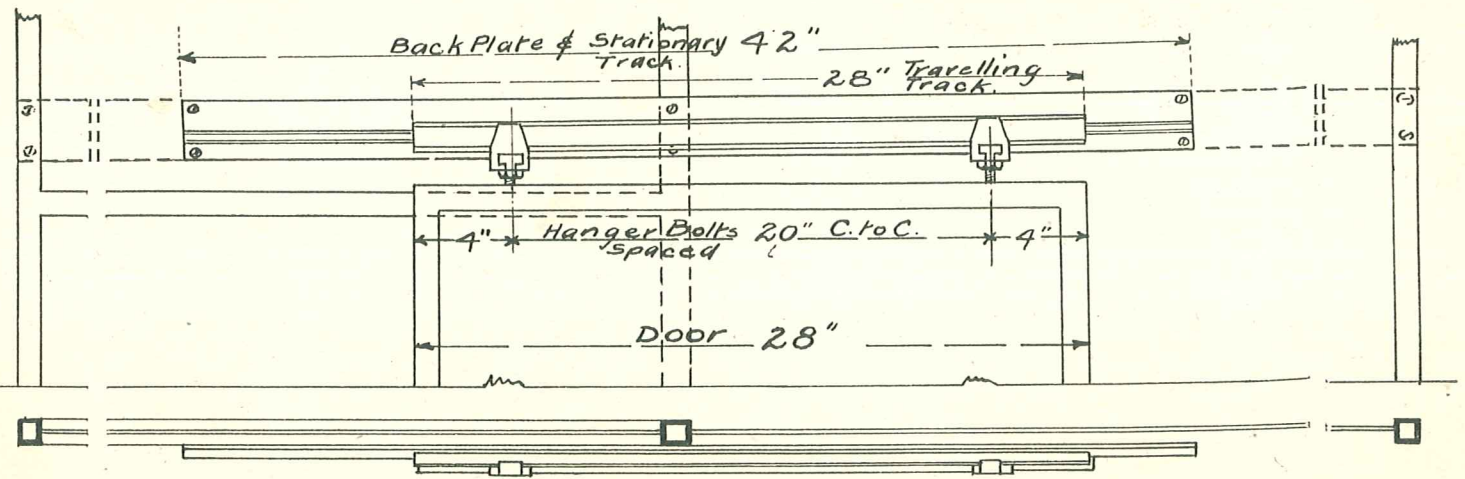
On angle, or regular back plate

Door up to 26" in width.....	\$7.00
" 26" " 32" " "	8.00
" 32" " 38" " "	9.00
" 38" " 44" " "	10.00



For Iron Grille Doors
or Bank Cages, etc.

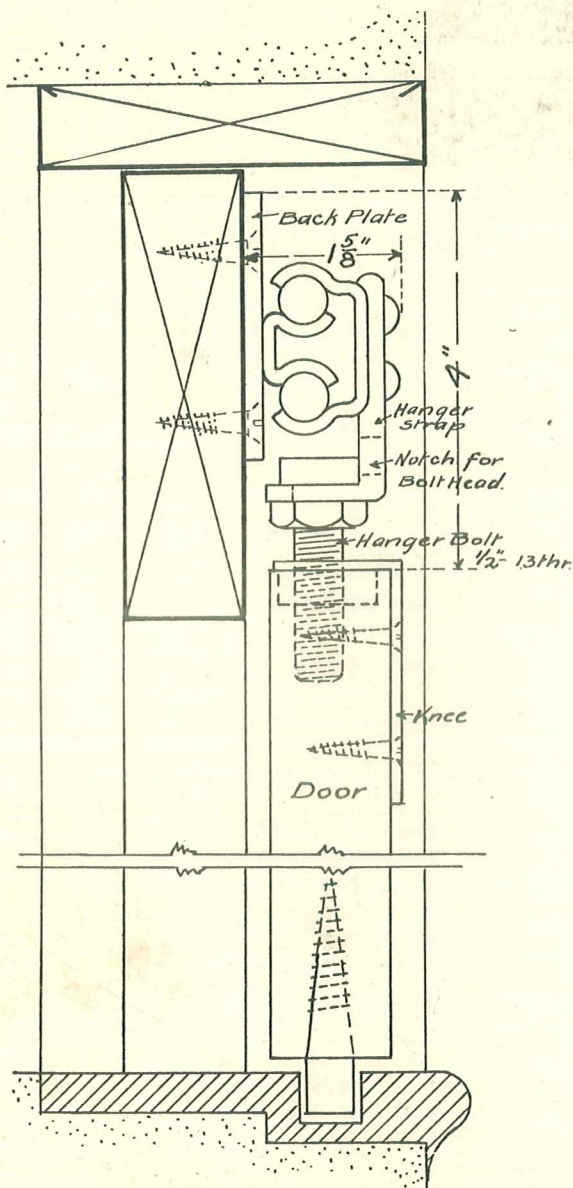
For Wardrobe Installation



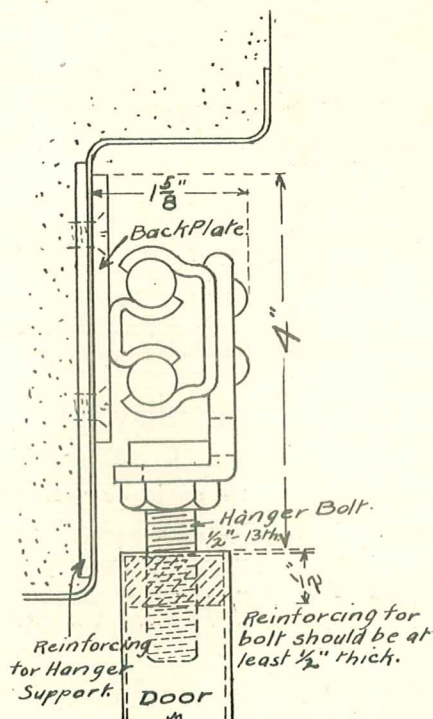
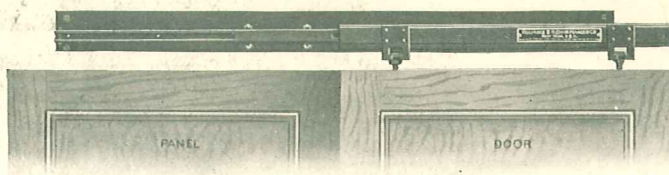
For Bank Cages: typical elevation and plan. Hanger may be pitched to be self closing. In this case we must know the direction of closing. At a small additional cost the back plate of the hanger can be extended to fasten to corner posts of the cages as shown in dotted lines.

ALL CUTS SHOWING END SECTION VIEWS ARE HALF SIZE

DRAWN METAL HANGER STYLE "GG" FOR SINGLE DOORS



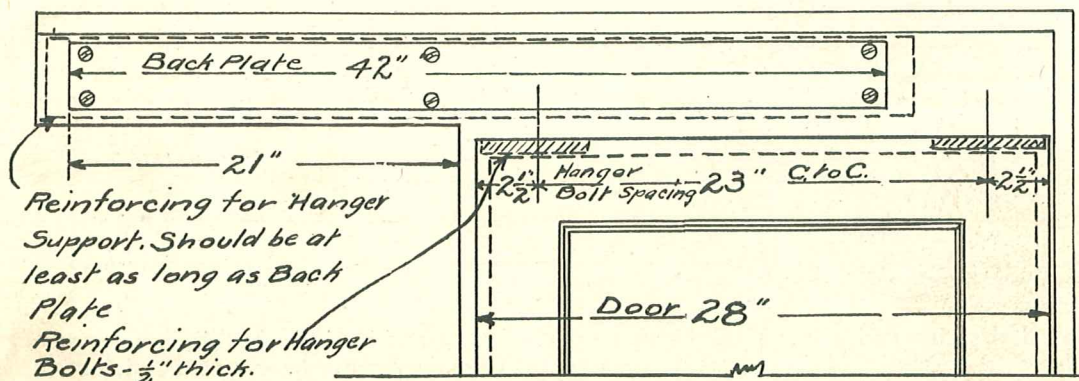
End section of single Hanger "GG" for thin Kalamein doors mounted on Kalamein arm where two doors in the opening are required to swing; one of them to slide as well. Arm Swings.



End section of single Hanger "GG" for thin hollow metal doors. Mounted on metal header. Shows reinforcement necessary for support. For length of back plate and location of screws see front elevation.

PRICES OF RELIANCE HANGERS, STYLE "GG"

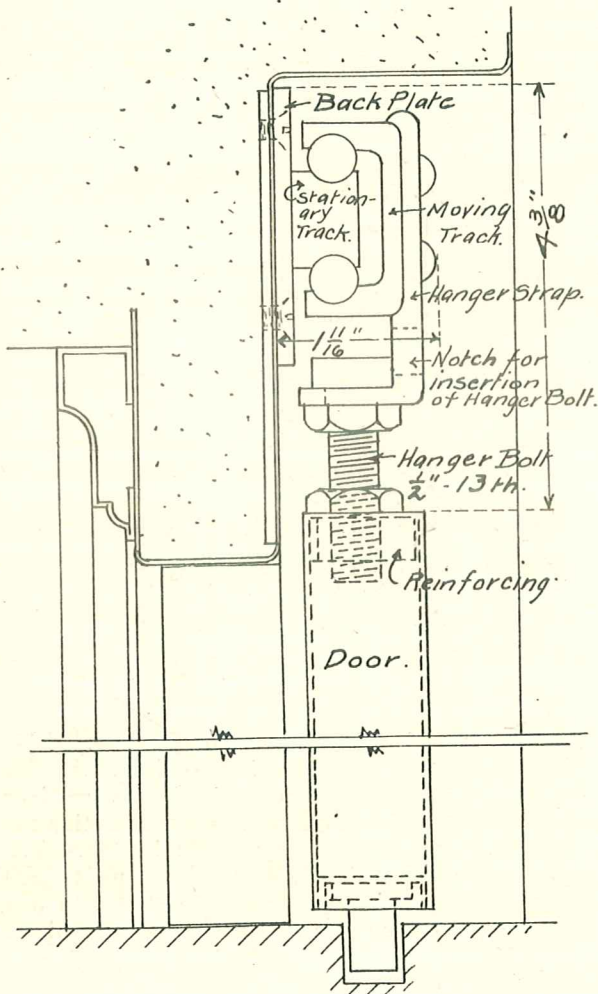
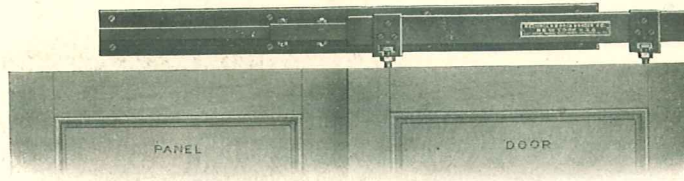
Door up to 26" in width	\$ 8.75
" 26" " 32" " "	10.00
" 32" " 38" " "	11.25
" 38" " 44" " "	12.50
" 44" " 50" " "	13.75



Front elevation from inside of shaft showing Hanger in relation to door and arm. The illustration shows sample width doors, and location of screw holes (approximate). Doors of any other width have hangers built in the same proportionate length.

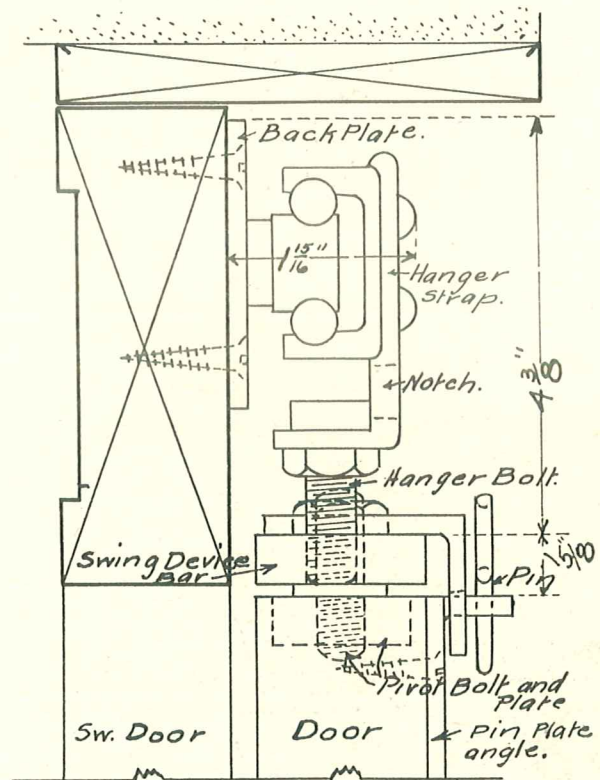
ALL CUTS SHOWING END VIEWS ARE HALF SIZE

STYLE "C" HANGER FOR SINGLE DOORS



Style "C" Hanger for Single Doors. Shown mounted on standard metal buck. This Hanger suitable for doors 1" to 1½" in thickness and up to 200 lbs. in weight.

As will be seen from cut top of page, it is light weight, neat and compact. The support for this Hanger should be at least as long as the back-plate of the Hanger to get screws as shown in the face view on page 9.



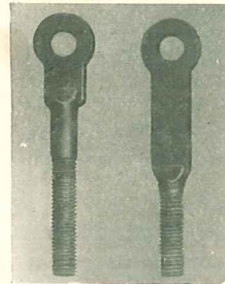
Style "C-A" Hanger for hollow metal or kalamein doors 1¾" thick. Also shows Swing Device for swinging the door into the hall to obtain the full width of the opening in cases where it is not possible to swing the arm.

These Swing Devices can be applied to any of our standard Hangers either Single or Two Speed. A drop bolt should be provided for the bottom of the door directly under the Swing Device Pivot to prevent the door from tilting when swung into the hall.

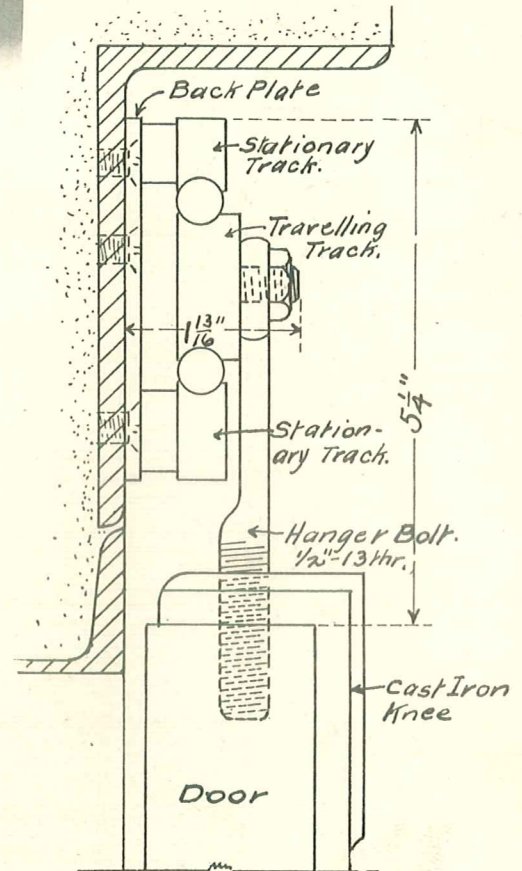
For prices see page 9

ALL CUTS SHOWING END SECTION VIEWS ARE HALF SIZE

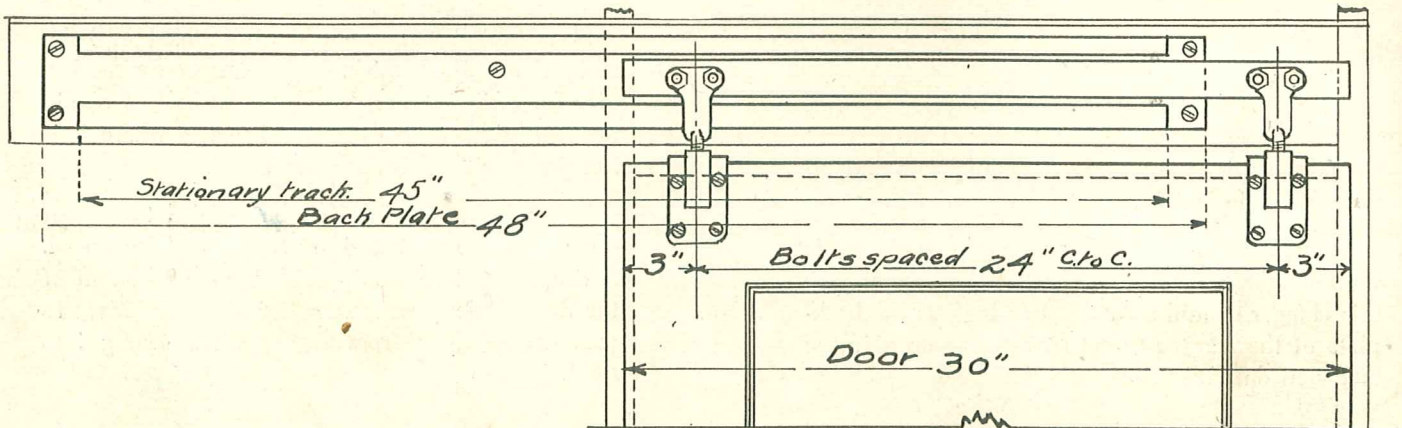
A close-up photograph of the top edge of a door. Two metal hinges are visible, securing the door to a dark frame. A small, rectangular label is affixed to the frame between the hinges. The door itself is a dark, solid color with a simple rectangular panel design.



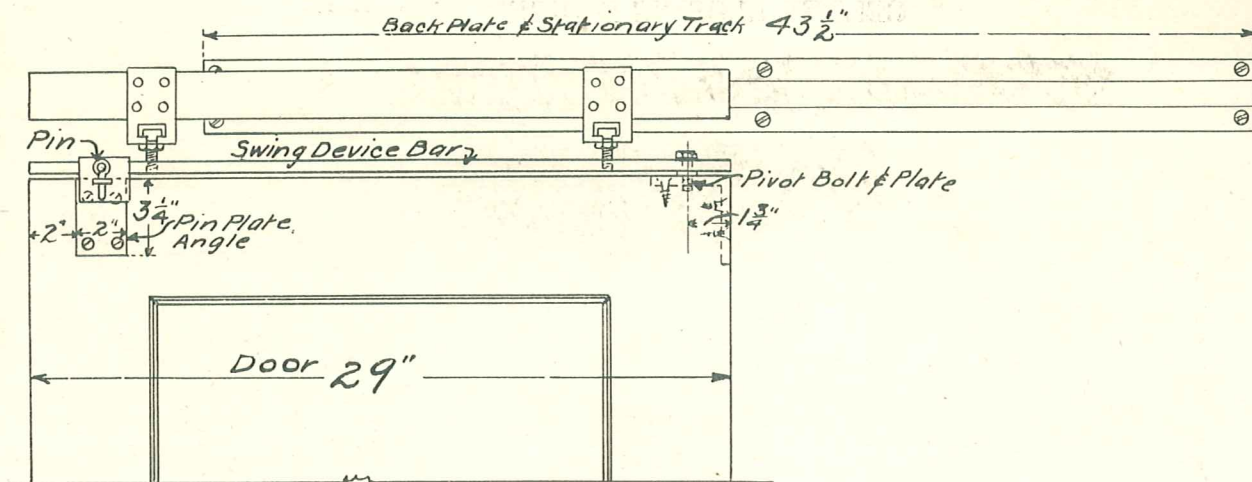
*For Prices
Single Hangers,
see page 9*



Style "D-A" Hanger for single door. This shows eye bolt for connecting to door. It also shows cast iron apron for application to wood or kalamein doors. With this form of connection the doors can be 1½" or over in thickness. The Hanger illustrated is made for doors up to 200 lbs. in weight. For doors from 200 lbs. to 500 lbs. about ½" or ¾" more headroom is required.



ALL CUTS SHOWING END VIEWS ARE HALF SIZE



Front elevation from shaft of style "C" Hanger and Swing Device showing standard measurements for swing device fittings on kalamein doors. For hollow steel or iron doors we omit Pivot Bolt plate and furnish only pivot bolt for which hollow steel door must be reinforced and tapped.

PRICES OF RELIANCE HANGERS STYLES "B," "C," "C-A," "D," "D-A"

Changed

Doors up to 200 lbs. in weight.

Width of door up to 32"	\$11.50
" " " 32" " 38"	13.00
" " " 38" " 44"	14.50
" " " 44" " 50"	16.00
" " " 50" " 56"	17.50
" " " 56" " 62"	19.00

PRICE SWING DEVICE FOR DOOR UP

38" in width	\$3.00
38" to 44" in width	3.25
44" " 50" " "	3.50

For two speed doors, double the price.

These prices cover overhead work only.

Does not include hinges for panel, or flush bolt for bottom of door.

For details of swing device see end section and face view Hanger "C-A", page 7.

PRICES OF RELIANCE HANGERS STYLE "D" AND "D-A"

Doors 200 to 400 lbs.

These Hangers made with slightly heavier tracks than the ones illustrated and require more headroom.

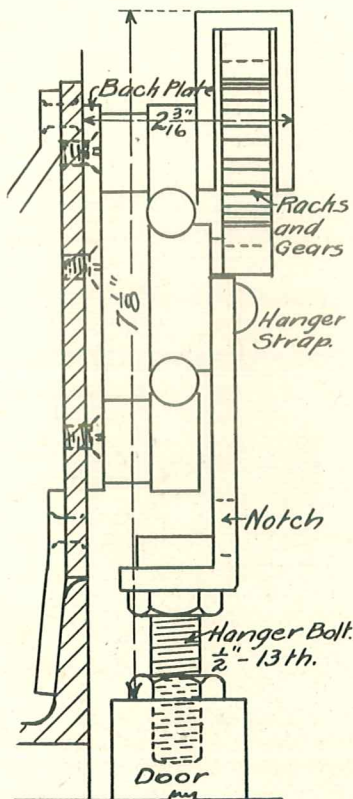
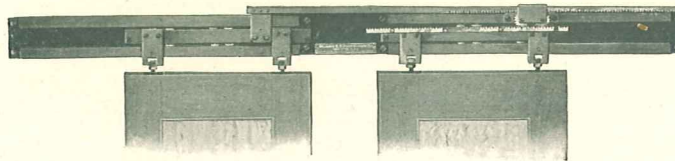
Width of door up to 32"	\$13.25
" " " 32" " 38"	14.75
" " " 38" " 44"	16.25
" " " 44" " 50"	17.75
" " " 50" " 56"	19.25
" " " 56" " 62"	20.75

Doors 400 lbs. to 600 lbs.

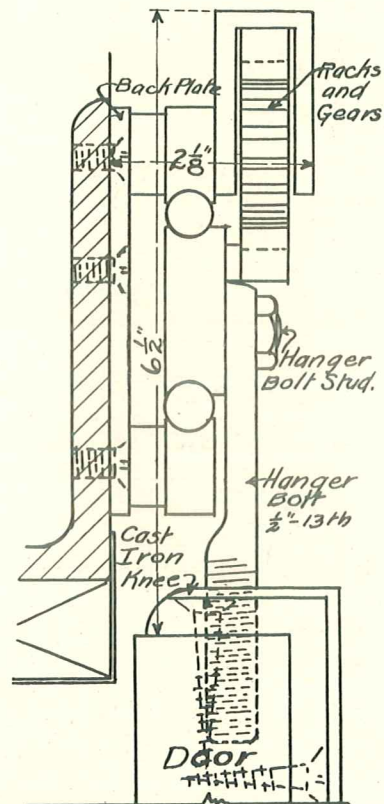
Width of door up to 3'2"	\$18.00
" " " 3'2" " 3'8"	19.50
" " " 3'8" " 4'2"	21.00
" " " 4'2" " 4'8"	22.50
" " " 4'8" " 5'2"	24.00
" " " 5'2" " 5'8"	25.50
" " " 5'8" " 6'2"	27.00
" " " 6'2" " 6'8"	28.50
" " " 6'8" " 7'2"	30.00
" " " 7'2" " 7'8"	32.00
" " " 7'8" " 8'2"	34.00
" " " 8'2" " 8'8"	36.00
" " " 8'8" " 9'2"	38.00
" " " 9'2" " 9'8"	40.50
" " " 9'8" " 10'2"	43.00

FOR HEAVIER DOORS SEND FOR SPECIAL DETAILS AND PRICES TO SUIT CONDITIONS

CENTER CLOSING HANGER "H"



Reliance Hanger Style "H"
for center closing doors 1" to
1 1/2" in thickness and up to 200
lbs. in weight.



Style "H-A" with hanger bolts
suitable for doors 1 5/8" to 2"
thick and up to 200 lbs. each.
This also shows C. I. knee for at-
taching to kalamein doors. For
heavier doors, slightly more head-
room is required.

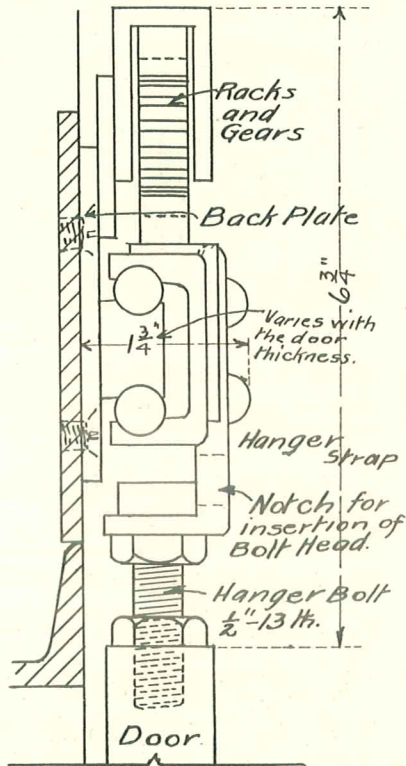
PRICE OF HANGERS "H," "H-A," "T" & "J"

Doors up to 200 lbs. each.					Doors 200 to 400 lbs. each.				
Width of each door up to 20"					\$30.50	Width of each door up to 26"			\$37.00
" " " " 20" " 26"					33.50	" " " " 26" " 32"			40.00
" " " " 26" " 32"					36.50	" " " " 32" " 38"			43.00
" " " " 32" " 38"					39.50	" " " " 38" " 44"			46.00

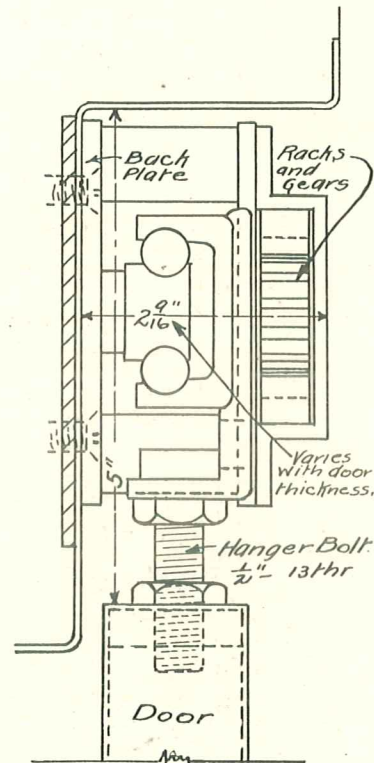
Without Rack and Gear—Deduct \$10.00

THESE HANGERS HAVE RACK AND GEAR DEVICE FOR MOVING BOTH DOORS AT THE SAME TIME

CENTER CLOSING HANGERS "I" AND "J"



End view of Reliance center closing Hanger Style "I"; suitable for doors from 1" to $1\frac{1}{2}"$ in thickness and up to 200 lbs. each in weight. It is particularly good for installation of thin doors where it is desirable to reduce the distance from the face of the door to the edge of the sill. The Hanger is only $1\frac{3}{4}"$ in thickness.



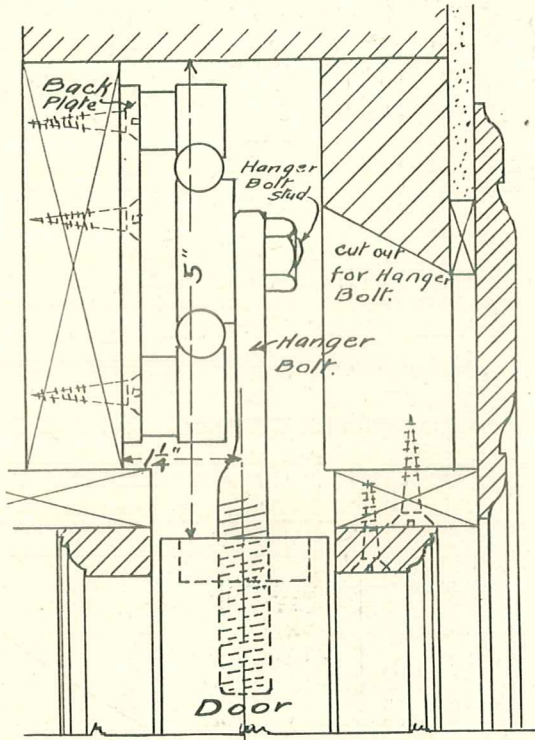
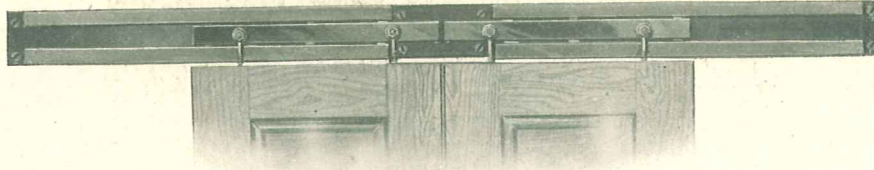
End view of Reliance Style "J" Hanger for center closing doors, suitable for doors 1" to 2" in thickness, and weighing up to 200 lbs. each. For use where headroom is limited.

THESE HANGERS HAVE RACK AND GEAR DEVICE FOR MOVING BOTH DOORS AT THE SAME TIME

For prices see page 10

ALL CUTS SHOWING END SECTION VIEWS ARE HALF SIZE

CENTER CLOSING HANGER "F-A"



FOR PRICE

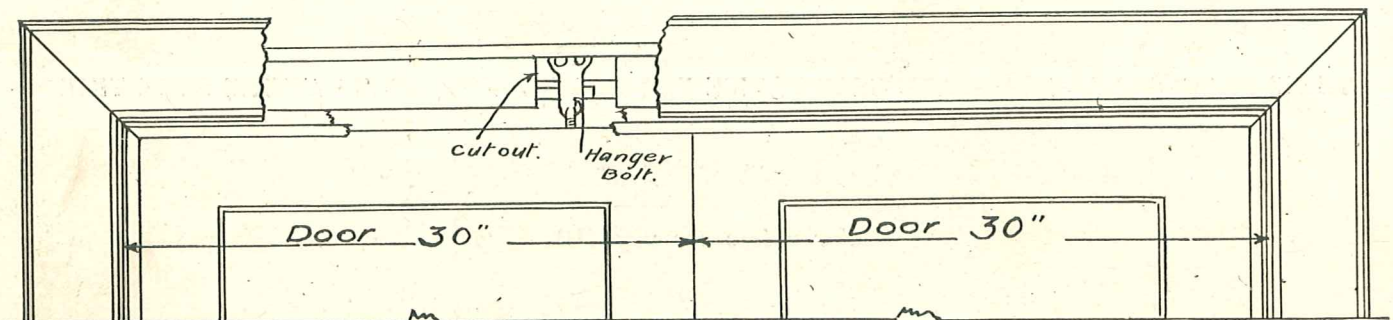
See price list Hangers "H" & "H-A" on page 10,
and deduct \$10.00

Prices for Special Conditions, or Heavier Doors
on application.

We will also be pleased to make suitable drawings
for any installation you may
have in prospect.

End view of center closing Reliance Hangers Style "F-A." This hanger is furnished without racks and gears for parlor doors. The illustration shows arrangement of wood rubbing strips and trim. As will be noted these are put on with wood screws to be fastened in place after the doors are hung. Notches are cut through header to pass the bolts through and covered with the finish trim.

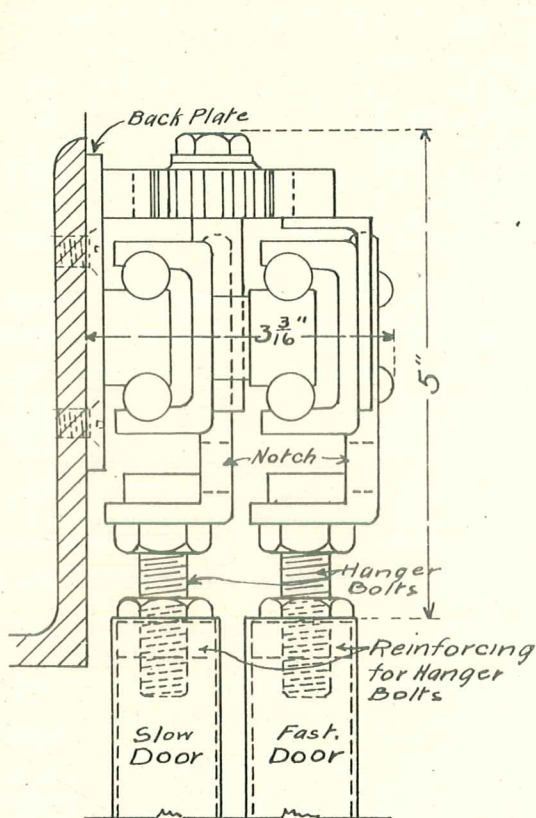
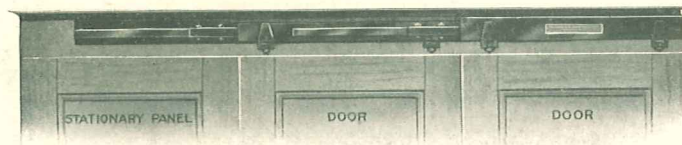
This pocket plan can be used for a single sliding door as well as for double.



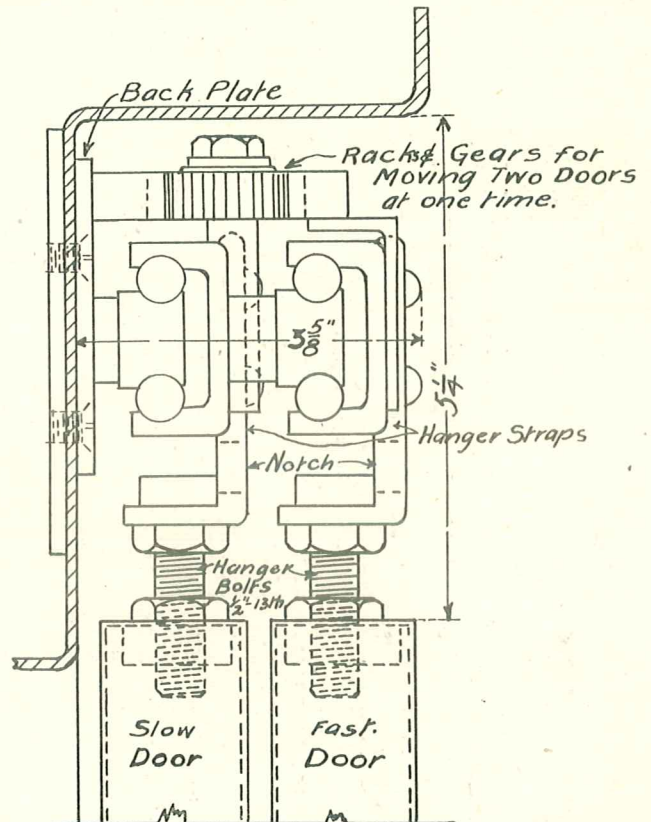
Front elevation of doors and pocket. Showing method of attaching removable trim and notches for hanger bolts.

ALL CUTS SHOWING END SECTION VIEWS ARE HALF SIZE

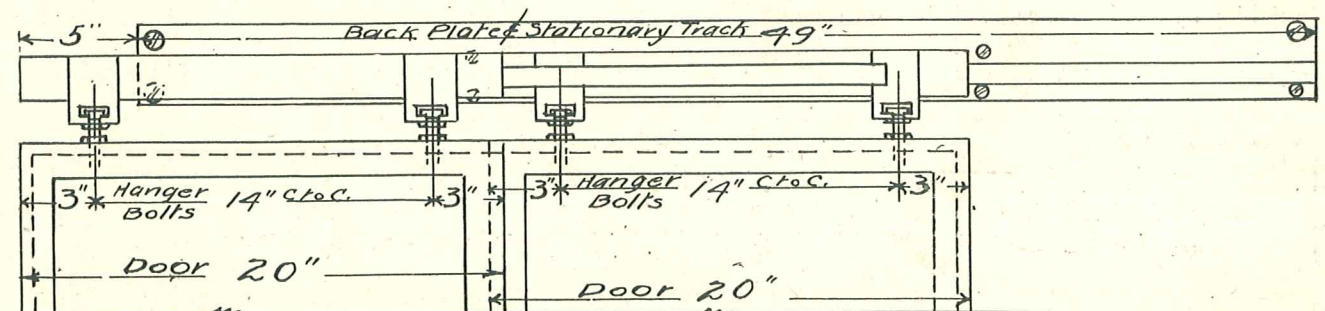
TWO SPEED HANGER "L"



End section Reliance Hanger Style "L" mounted on angle iron, and is suitable for doors $1\frac{1}{4}$ " thick weighing not over 150 lbs. each.



End section Reliance Hanger Style "L-A" mounted on Metal buck, which should be continuous for full length of backplate, suitable for doors $1\frac{1}{2}$ " to $1\frac{3}{4}$ " thick and weighing not over 150 lbs. each.



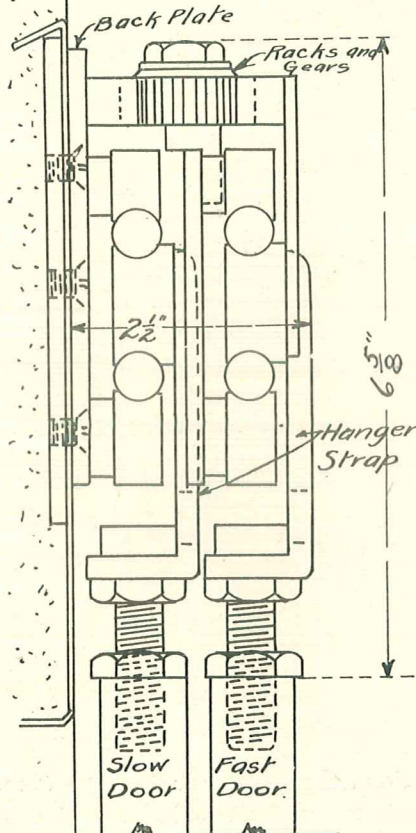
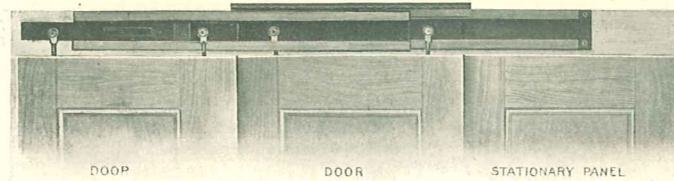
Elevation of Doors and Hangers from shaft side shows sample width doors and applies to both of the above end views.

Shows doors closing to the LEFT.

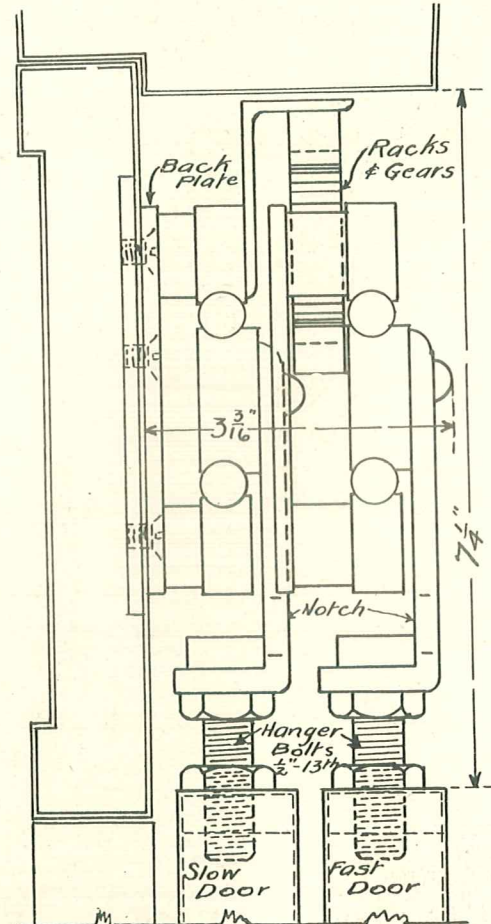
For prices see page 15

ALL CUTS SHOWING END SECTION VIEWS ARE HALF SIZE

TWO SPEED HANGER "K-B"

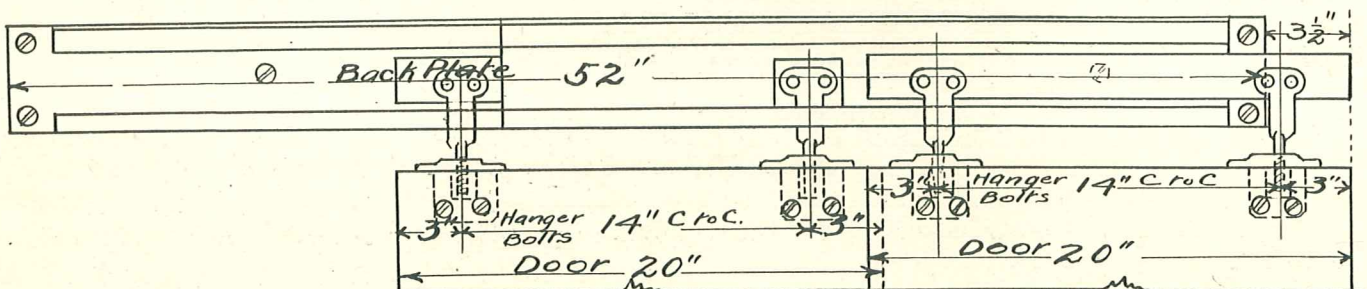


For prices
see page No. 15



End view of Reliance Two Speed Hanger Style "K," suitable for thin doors $\frac{7}{8}$ " or 1" thick and weighing up to 150 lbs. each. It is shown mounted on sheet metal buck, reinforced for the full length of the backplate.

End view Reliance Two Speed Hanger Style "K-A." Hollow steel doors are shown and also the reinforcement in the top of them. This should be at least $\frac{1}{2}$ " thick to have the best results, as the bolt is U. S. standard 13 thread, and should have at least 6 threads to hold the weight. The hanger shown is suitable for doors $1\frac{1}{4}$ " to $1\frac{3}{8}$ " thick and weighing 150 lbs. each.



Front elevation of Style "K", "K-A", and "K-B" Hangers. Shows sample width doors and backplate. Shows doors closing towards the RIGHT.

ALL CUTS SHOWING END SECTION VIEWS ARE HALF SIZE

PRICES—RELIANCE TWO-SPEED HANGERS
STYLES "L," "L-A," "K," "K-A" AND "K-B"

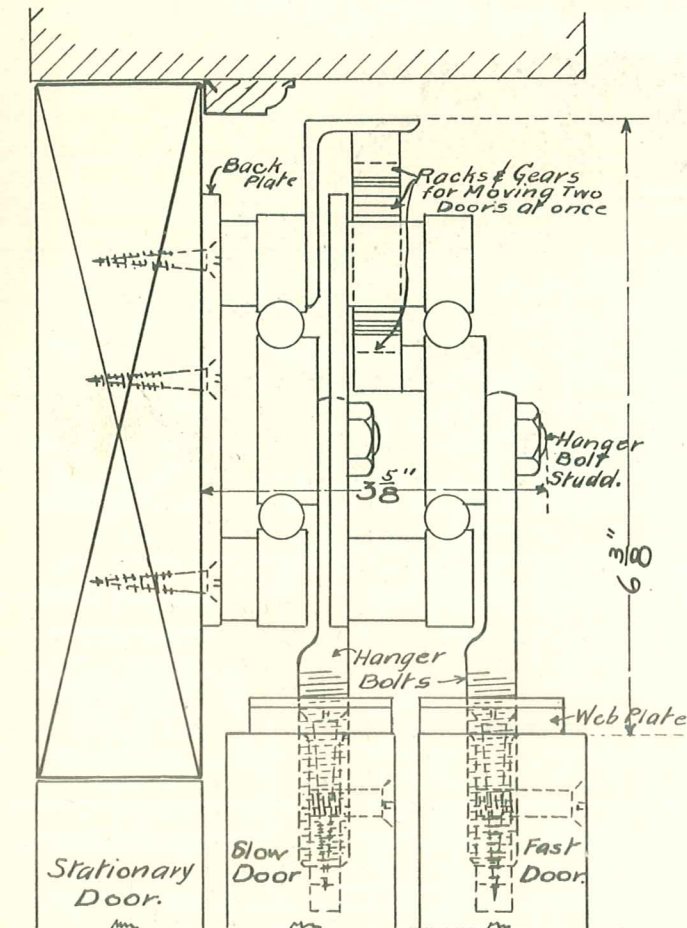
Doors up to 150 lbs. each.

Width each door up to 20"	\$44.00
" " " 20" " 26"	47.25
" " " 26" " 32"	50.50
" " " 32" " 38"	53.75
" " " 38" " 44"	57.00

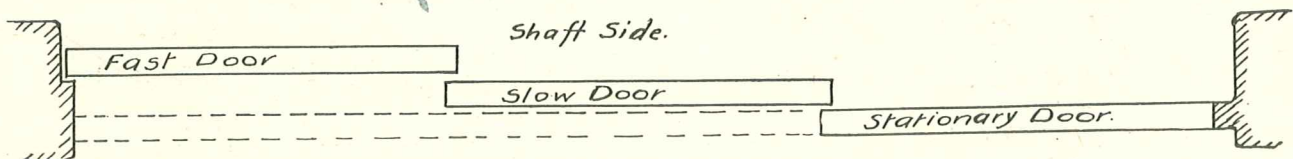
For doors each 150 to 300 lbs.

Width each door up to 32"	\$53.75
" " " 32" " 38"	56.75
" " " 38" " 44"	59.75
" " " 44" " 50"	63.00

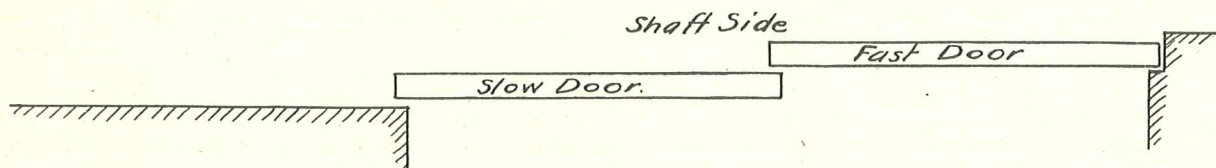
Without Rack & Gear—Deduct \$12.50 from above.



End view of Reliance Two-Speed Hanger Style "K-B" connected to kalamein doors $1\frac{3}{4}$ " thick. It is shown mounted on kalamein arm which may or may not swing into the hall as desired; suitable for doors $1\frac{5}{8}$ " to 2" thick and weighing up to 150 lbs. each.



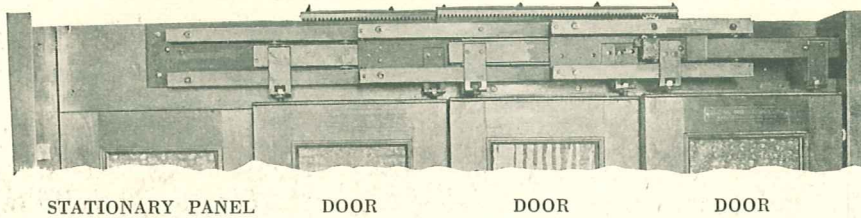
Plan view showing two doors and stationary panel. In this case the support for the Hanger is naturally carried the full width of the three doors.



Plan view showing only two sliding doors in the opening, sliding along the wall of the shaft. A support must be furnished at the rear to hold up the back end of the Hanger. It is a very poor arrangement to fasten by means of expansion bolts to hollow tile brick or concrete. The supporting medium should be solidly anchored to the masonry as there is a considerable shock and vibration in the operation of the doors and if the fastenings are not secure they soon work loose.

With all double speed Hangers, the door nearest the closing jamb travels exactly twice as far and twice as fast as the second door. In determining the width and lap of doors, this should be taken into consideration, so that the doors will line up properly.

RELIANCE HANGER STYLE "M"



For moving three doors in the same direction at varying speed, so that all are opened or closed at the same time.

This device requires 1" headroom above Back Plate.

Medium Weight. *Doors from 75 to 150 lbs. each.*

Width of each door up to 14"	\$56.00
" " " " 14" " 20"	59.00
" " " " 20" " 26"	62.00
" " " " 26" " 32"	65.00

Width of Back Plate $4\frac{1}{2}$ ".

Heavy Weight. *Doors from 150 to 300 lbs. each.*

Width of each door 20"	\$66.00
" " " " 20" to 26"	69.00
" " " " 26" " 32"	72.00

Width of Back Plate $5\frac{1}{2}$ ".

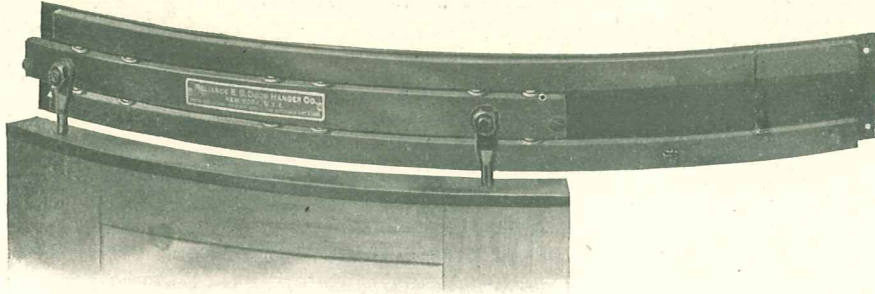
Without Rack & Gear—Deduct \$18.00.

About $\frac{3}{4}$ " required between top of door and bottom of lower track, where Hanger Bolts are used.

About 2" required between top of door and bottom of lower track, where Hanger straps are used.

End view same as two-speed hanger with another section added.

RELIANCE HANGER STYLE "R-A" **FOR CURVED DOORS**



Face View. Showing single (CURVED) door closed.

Provided the radius is not less than 3 feet, these Hangers operate the curved doors just as easily as ordinary straight doors.

Double doors can be operated in the same manner as our Style "H" (page 10), with the "Double Gear" opening device. Prices on application.

Price of Single Hangers, provided the radius is not less than three (3') feet:—

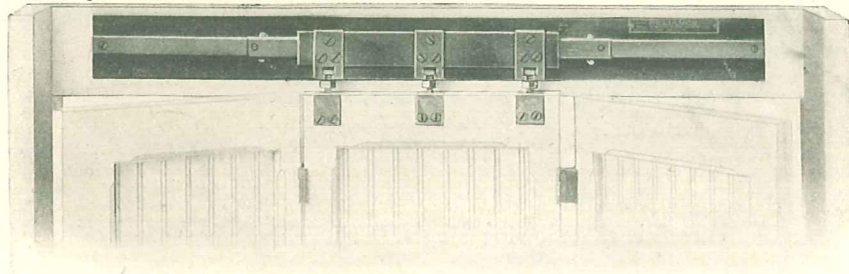
Medium Weight. For door weighing from 75 to 200 lbs.

Width of door	up to	26"		\$19.75
"	"	26" "	32"	22.25
"	"	32" "	38"	24.75
"	"	38" "	44"	27.25
"	"	44" "	50"	29.75
"	"	50" "	56"	32.25
"	"	56" "	62"	34.75

Heavy Weight. For door weighing from 200 to 400 lbs.

Width of door	38"		\$31.50
"	"	38" to 44"	34.00
"	"	44" " 50"	36.50
"	"	50" " 56"	39.00
"	"	56" " 62"	41.50

RELIANCE HANGER "W"



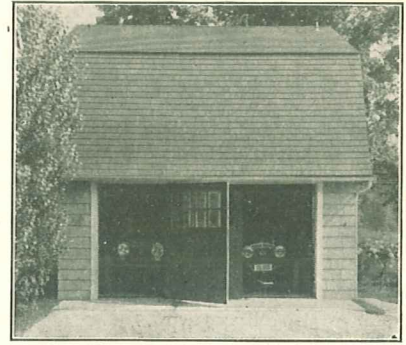
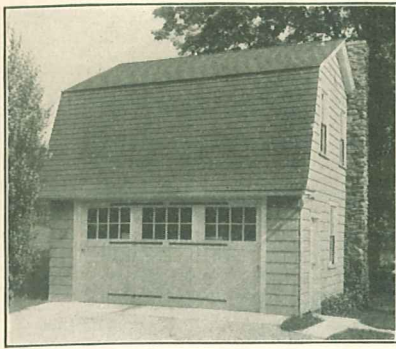
The above cut shows in detail the method of utilizing the entire width of a garage for two cars by means of Reliance Ball-bearing Door Hanger, style "W," so that there is plenty of clearance for the cars to enter or leave the building without the danger of crumpling the mudguards, or any necessity for working the car backwards and forwards to get it into its place.

The building may be made absolutely weather tight, the same as if only hinged doors were used. The concrete floor is made about 1" higher than the outside and an angle iron or a maple strip 4" x $\frac{7}{8}$ " should be secured to the cement to act as a guide and stop for the sliding door and should be level with inside floor. If maple strip is used it should be clinched to concrete by means of long nails driven through board near bottom and projecting on each side of strip. If this is not done the concrete floor soon wears out the bottom of the door. Weather strips may be used on the two swing doors which shut tight against jamb stops at either side.

The center door is made about 1" higher than the side doors and about $1\frac{1}{2}$ " wider. The extra height is to allow the sliding door to lap up past the head jamb, and the extra width to allow the side doors to clear the hinges, and fold close against the center door.

Practically no more effort is used sliding the three doors than is needed to move a small single door.

For prices see page 19



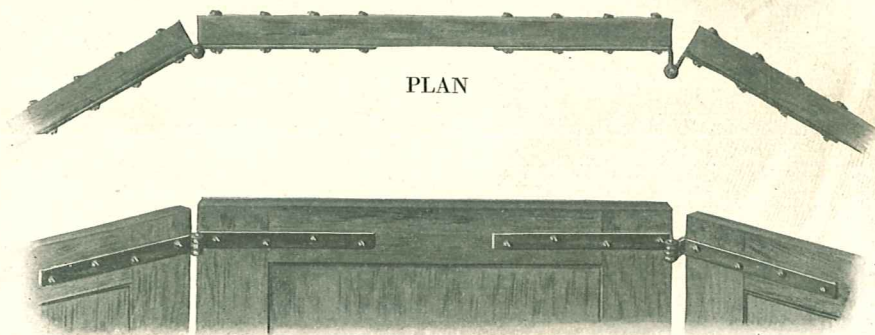
The above cuts show two views of a garage with two cars in it. The cut at the left shows the doors closed and locked and also shows a small door at the side for an entrance. The strap hinges shown are the best for the purpose as they prevent any possible sagging of the side doors. The cut at the right shows the right hand door opened and folded back on the center door, which is attached to the hanger. The left hand door is partially folded back, ready from this position to slide in either direction, which will give two-thirds of the entire width at one side or the other as desired.

Special drawings will be prepared on request.

PRICE LIST

For Doors 1½" to 2¼" Thick and Each Weighing 150 to 200 lbs.

Width of center door	up to 4' 8"		\$40.00
" " "	" 4' 8" " 5' 2"		42.50
" " "	" 5' 2" " 5' 8"		45.00
" " "	" 5' 8" " 6' 2"		50.00
" " "	" 6' 2" " 6' 8"		55.00
" " "	" 6' 8" " 7' 2"		60.00

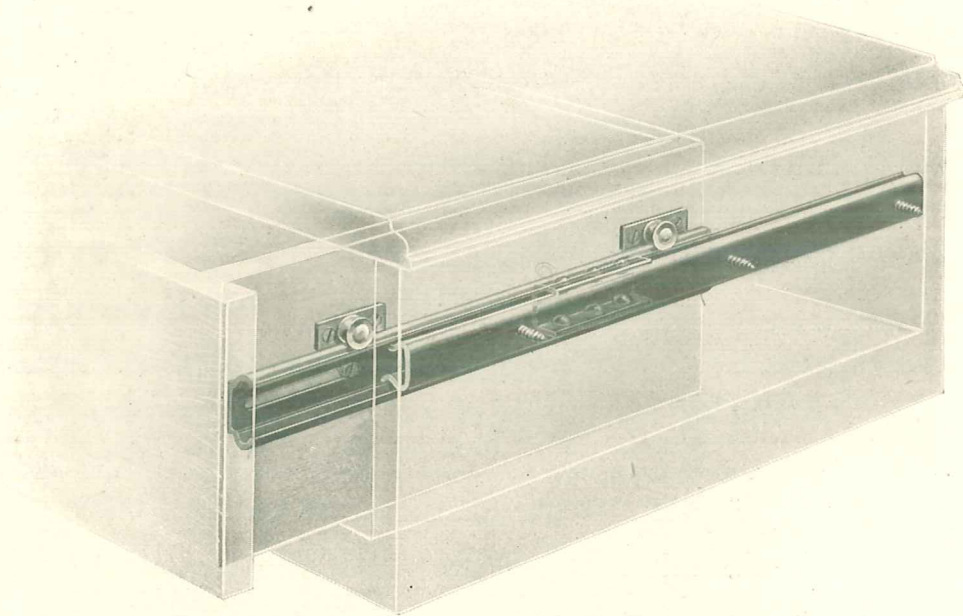


GARAGE DOOR HINGES

These hinges are made of wrought steel, heavy and strong, three of them are made close and three offset, as shown above.

Price, \$35.00 per set of six

RELIANCE BALL BEARING DRAWER SLIDE



This Slide is designed for use in connection with built-in linen drawers, cedar drawers, etc., which contribute so much to convenience in the modern residence. It is also especially suitable for banks, libraries, hospitals and other large institutions. The cut clearly shows the device in relation to the drawer. It is very easily installed. This slide will not only operate easily (at the slightest pull of the finger) irrespective of the weight of the drawer or its contents, but will also permit the drawer to pull out ALL the way—its entire depth.

The Drawer can be removed from case, if desired.

For prices see next page

DIRECTIONS FOR INSTALLING DRAWER SLIDE

Sides of drawer should be set in $11/16''$.

As shown by illustration, inside member of the slide is fastened to the framework in a perfectly horizontal position.

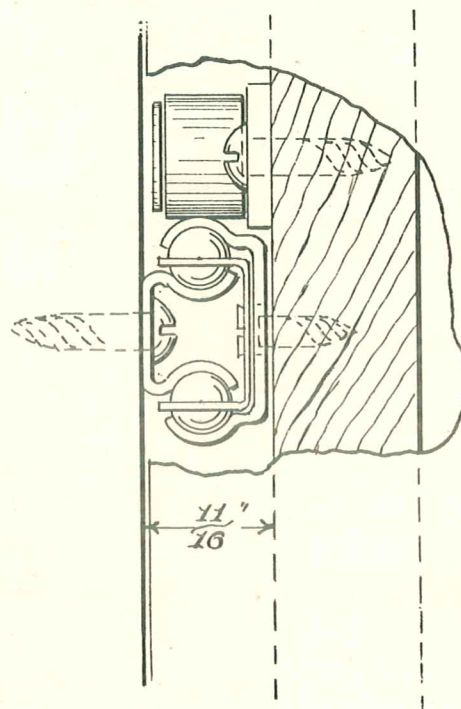
Fasten one pair of rollers from front of drawer back a little over $1/4$ of the depth of the drawer.

Fasten second pair of rollers near rear of drawer.

See illustration on page 20.

Put stop screw in the side of drawer to run in slot, as shown, to prevent drawer being pulled out of frame.

Arranged in this way, the drawer slides out four-fifths of its depth on the ball bearings, after which, if necessary, it will pull out the rest of the way on the rollers.



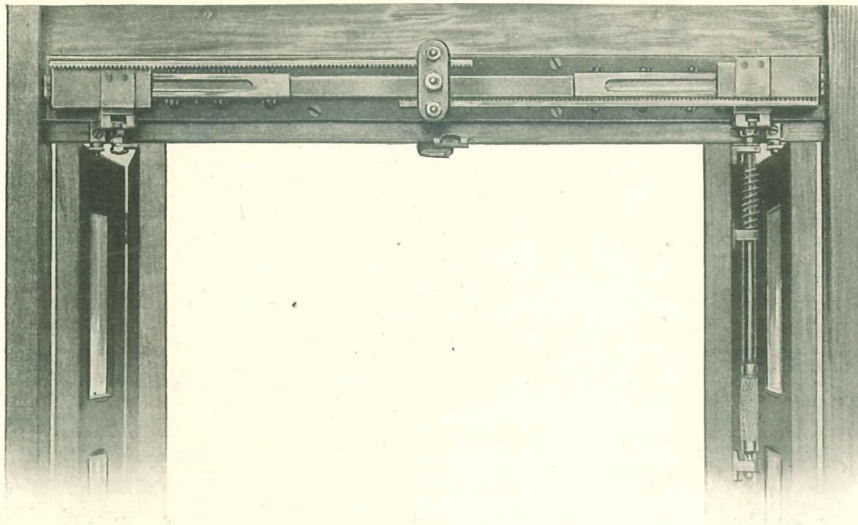
SHOWING ACTUAL SIZE

The only measurement required, when ordering, is the distance from the back of the front panel to the back of the drawer.

PRICE LIST

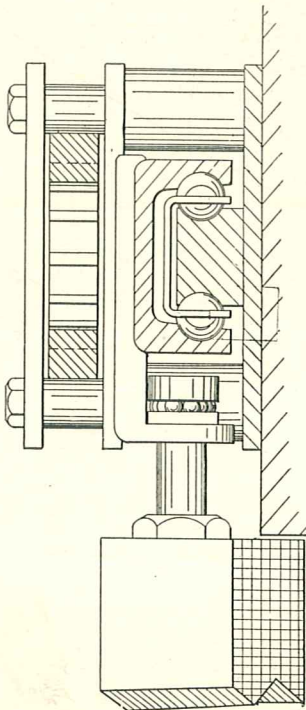
Drawers up to 20" in depth.....	\$3.50
" 20" " 26" " "	4.00
" 26" " 32" " "	4.50
" 32" " 38" " "	5.00
" 38" " 44" " "	5.50

RELIANCE HANGERS STYLE "T" FOR "FOLDING" GATES OR DOORS



DOORS OPEN

Front Elevation from inside of elevator shaft.



Where it is desired to get nearly full opening of the Elevator Car to expedite loading and unloading.

For Light Doors up to 75 lbs.

Width of each leaf up to 15".....	Complete	\$45.75
" " " " " " " ".....	Without Racks and Gear	35.00

For Heavier Doors up to 100 lbs. each.

Width of each leaf up to 18".....	Complete	\$52.50
" " " " " " " ".....	Without Racks and Gear	42.00

"Complete" includes Ball-Bearing Swivel, as well as operating device for moving all four leaves at same time.

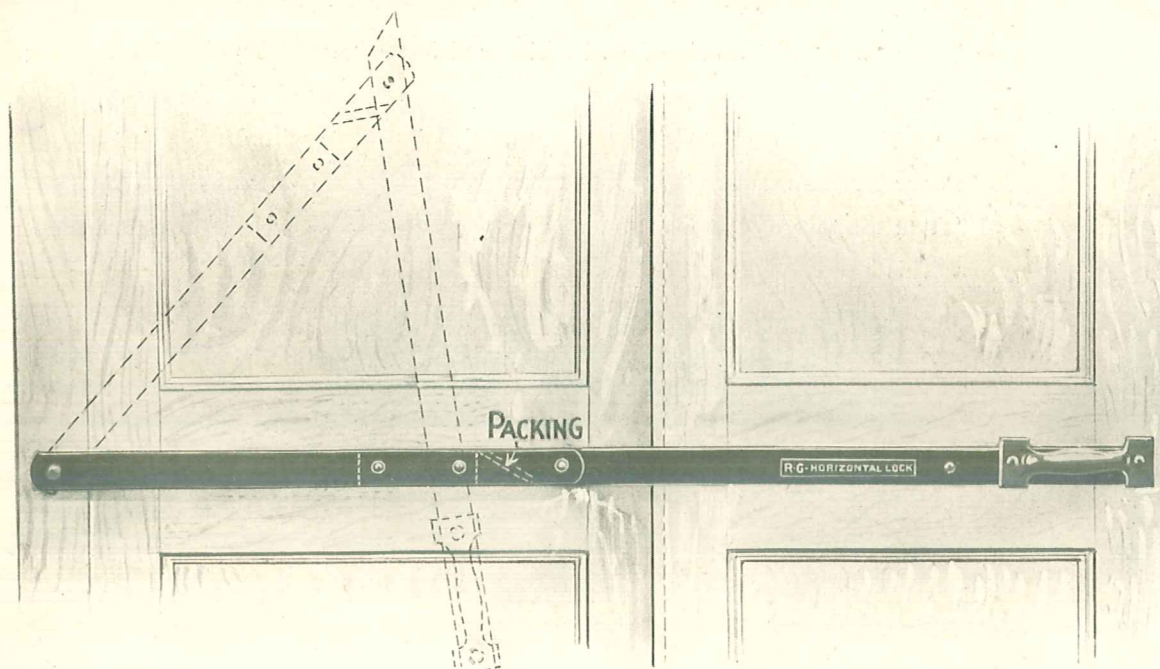
Prices do not include hinges, or pivoting pins for top and bottom of two outside leaves or guide pins for bottom of two inside leaves.

If lock is desired, price of same will be \$7.00.

Hanger requires 6" above top of doors.

ALL CUTS SHOWING END SECTION VIEWS ARE HALF SIZE

"RELIANCE-GRANT" HORIZONTAL DOOR LOCK
DULL BLACK FINISH—WITH POLISHED & PLATED HANDLE

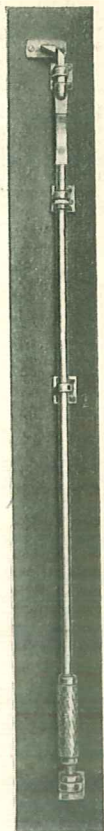


Requires 1 $\frac{3}{4}$ " from face of door to edge of sill.

For Single Doors not over 32" wide.....	}	\$15.00
For Center Closing Doors, each not over 32" wide		
For Combination Slide & Swing, door not over 32" wide.....		\$18.00
For Two-Speed Doors, attaching to both doors, each door not over 26" wide..		\$18.00
For Two-Speed Doors, as above, where they also swing into hall.....		\$24.00

Prices are for Standard Lock, and do not include any special brackets, for rear connections.

FOR WIDER DOORS—Prices on Application



BAR LOCK

BAR LOCK "A"

Bar Lock "A" is made of steel tubing and has a knurled handle with a spring concealed therein. This lock is made of the proper length to bring the center of the handle 3' 6" from the floor. Unless otherwise noted, we will figure the height of the door 7'. Can be furnished with brackets to bring the center of the lock $\frac{3}{4}$ " or 1" from the face of the door and will require either $1\frac{3}{8}$ " or $1\frac{5}{8}$ " from the door.

This lock will be finished black oxydized unless ordered in statuary bronze.

PRICE \$7.00

This lock can be furnished all brass either polished or dull finish, for \$8.50.

One key device is furnished to each shaft for unlocking from hall side. If more keys and clamps are needed the price will be 75c. per door.

RELIANCE LOCK No. 97

GRAVITY ONLY

(No springs)

This lock is constructed with flat bar and does not require a spring of any kind, as it works just the reverse of the usual Bar Lock. A slight pressure on the handle causes the upright Bar to lift and unlock, and the same motion naturally opens the door. When the pressure is removed from the handle, the bar drops of its own weight, thus putting the catch in position to engage the keeper when the door is closed. This lock can be placed on the rear or front stile of the door, the upper connections on tracks of the hanger.

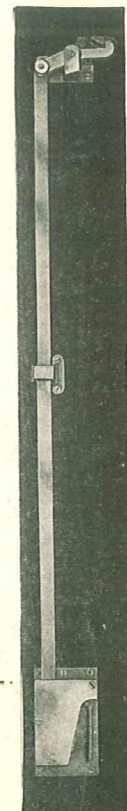
Requires only 1" from face of door.

Finish may be statuary bronze or black oxydized.

PRICE \$7.00

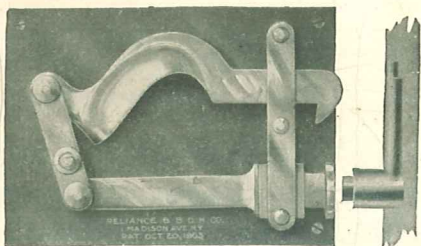
One key furnished to each shaft for unlocking from hall side.

Extra keys 15c. each.

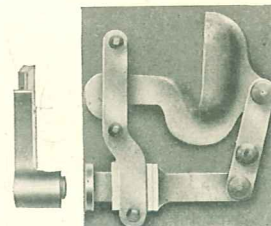


RELIANCE LOCK

RELIANCE GRAVITY DOOR LOCKS

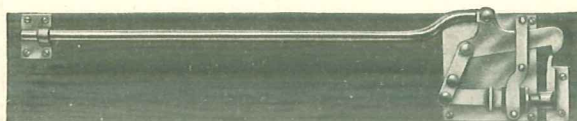


Gravity Lock No. 1.—Door open. Shows Right-Hand Lock. Back Plate 6 1/2" x 4 1/2". Thickness of Lock, 7/8".



Gravity Lock No. 2.—Door closed. Shows Left-Hand Lock. Back Plate 4 1/2" x 5 1/2". Thickness of Lock, 7/8".

PRICE \$4.00

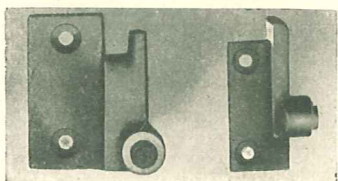


Gravity Lock No. 3.—Unlatched. Has extension rod across door. Back Plate 4 1/2" x 5". Thickness of Lock, 1 1/4". Can be furnished with flat bar and handle in place of rod, making thickness 7/8".

PRICE \$5.00

All Gravity Locks finished Black Oxydized, and are arranged to unlock with key from hall. One key furnished for each shaft. Extra Keys 15c. each.

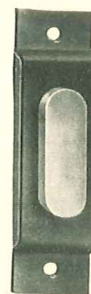
121



122

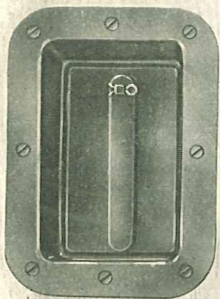
KEEPERS

132



133

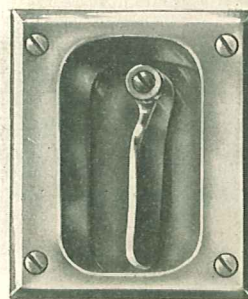
BUMPER



Black oxydized only
Cup Escutcheon No. 1
\$2.00

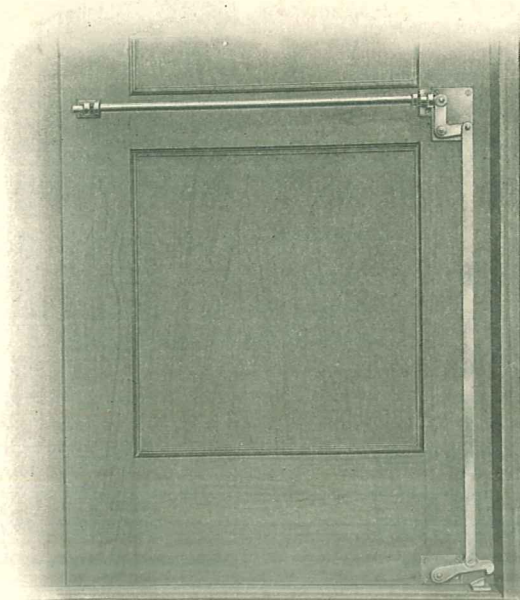
Cup escutcheon with handle can be furnished with any of the above locks—for use on push button Elevator Doors, so the Lock can be operated from both sides.

(Thickness of door required)



Polished Brass
Cup Escutcheon No. 2
\$4.00

RELIANCE LOCK No. 101



GRAVITY ONLY
(No Springs)

This lock is made on the same principle as the No. 97 lock with the rod reversed and placed on the front of the door locking to a strike on the sill. The lock has a horizontal rod across the rail of the door. A straight pull on the cross-bar releases the lock and opens the door. Requires 1 $\frac{1}{4}$ " from face of door.

Finished in statuary bronze or black oxydized.

PRICE \$8.00

One key furnished to each shaft for unlocking from hall side.

Extra keys 15c. each.



BROOKLYN FACTORY
of
RELIANCE BALL-BEARING DOOR HANGER COMPANY

"RELIANCE-GRANT" ELEVATOR DOOR CONTROLLER

(Formerly Russwin)



"Reliance" Hanger and "Reliance-Grant" Controller applied to doors operating in same direction, speed of both doors governed by controller.

Frequent accidents in connection with elevator service have made it necessary to perfect Safety appliances on doors leading to these Elevators.

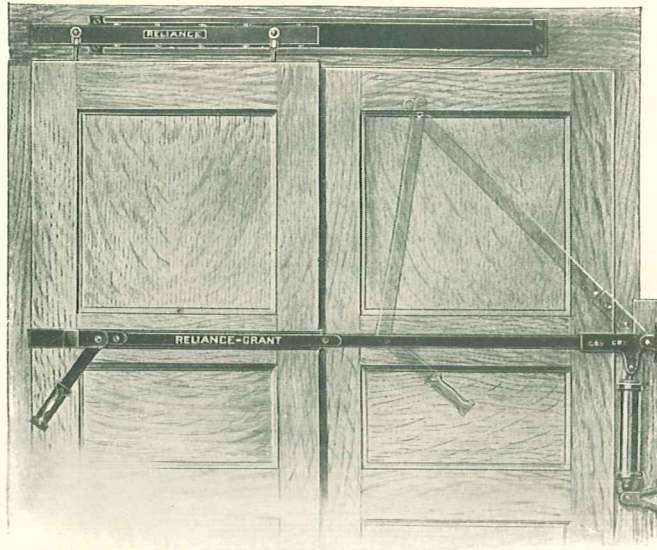
For this reason we have perfected and are offering the device shown, as the most practical and effective that has as yet been produced.

The action of the doors when released is rapid, until within a few inches of the closing point. The liquid checking device takes control, checks the rapid movement, and brings the doors to a noiseless—slamless stop.

These controllers can be manufactured to meet almost any conditions, and are made for Single, Center Closing, Two-Speed, and Combination Slide and Swing Doors.

Prices on Application

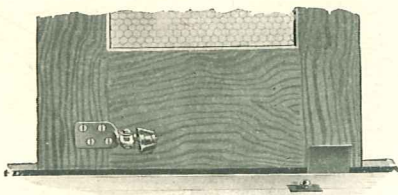
CONTROLLER FOR SINGLE DOOR, COMBINATION SLIDE AND SWING DOOR AND CENTER CLOSING DOORS



With the bar in horizontal position as shown, the door or doors are securely locked. A continuous straight pull on the handle both unlocks and opens the doors.

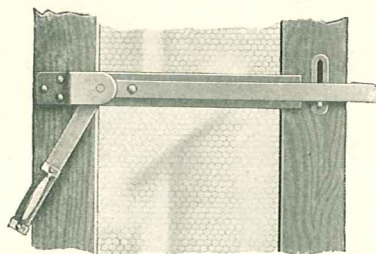
No projecting parts to injure or catch the clothing.

Standard controller in dead black finish. Handle grip polished and plated.



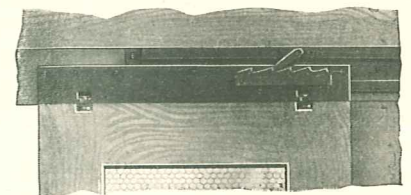
DOOR HOLDING DEVICE

The door holder automatically engages the door when fully open, holding it in that position until released by foot pressure on the push button, or, until it is automatically released, as the car leaves the platform.



UNLOCKING DEVICE

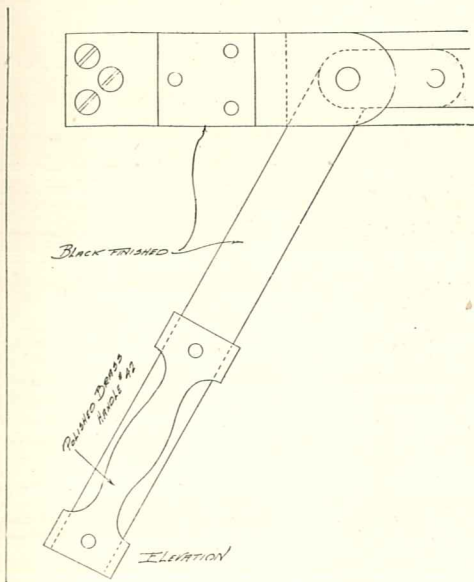
Used in connection with any controller for unlocking door from hall side. The tapered key is inserted underneath the arm, raising same from dead center, thus permitting opening of the door.



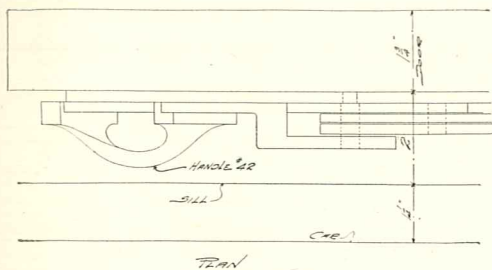
SAFETY DEVICE

This device is useful where no electric switch is installed, and is designed to prevent the re-opening of the door while the door is in the act of closing, and after car has left the landing.

THESE ACCESSORIES CAN BE SUPPLIED AT A SLIGHT ADDITIONAL COST

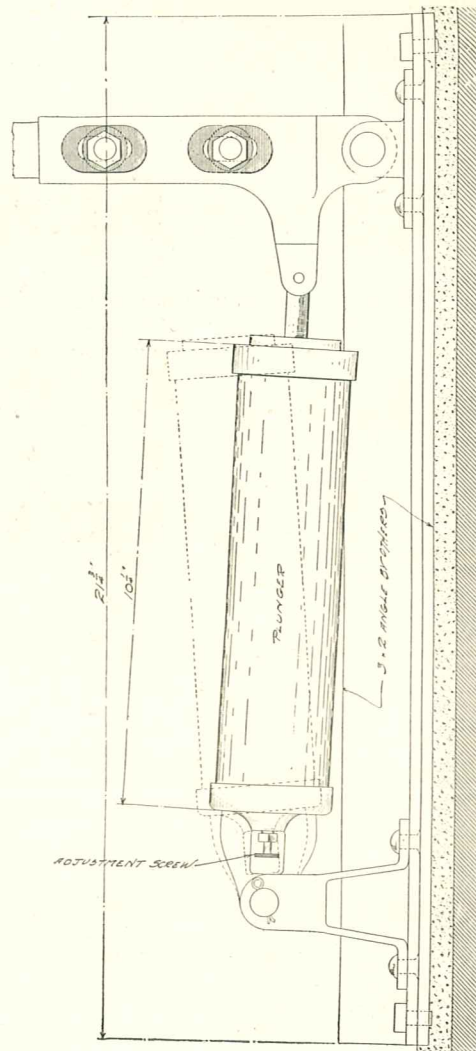


ELEVATION OF STANDARD HANDLE



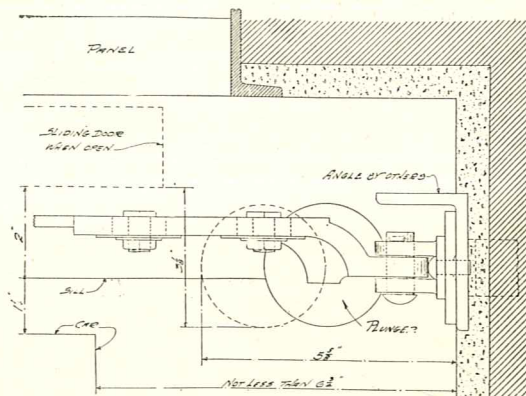
PLAN OF STANDARD HANDLE

NOTE—Requires $1\frac{3}{4}$ " from face of door.



ELEVATION OF CONTROLLER CHECK

The speed of the door is regulated by means of the adjusting screw shown at the bottom of the check.



PLAN OF CONTROLLER CHECK

NOTE—Requires $6\frac{3}{4}$ " from car to wall.

DETAILS REQUIRED FOR RELIANCE-GRANT CONTROLLER

Width of Stiles Shaft Side 44" or 54" from Floor Section on this Line.....

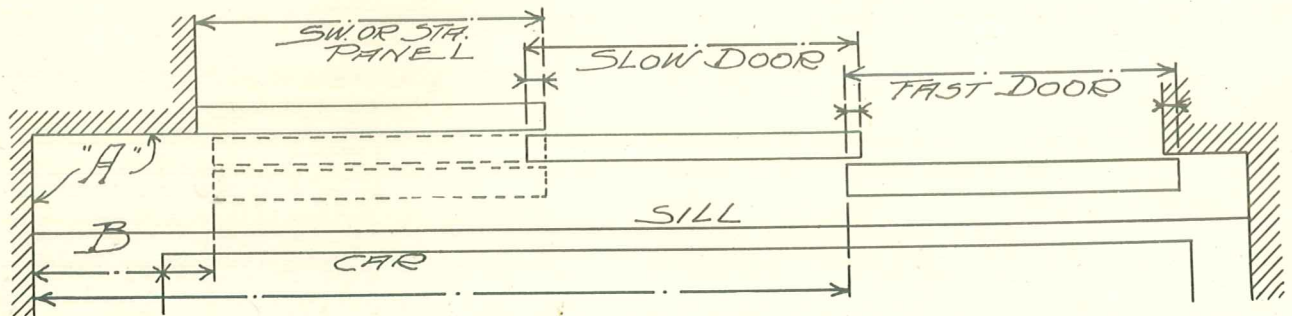
Doors made of: WOOD—KALAMEIN—IRON—HOL. METAL.

Material at "A": WOOD—CONCRETE—TERRA COTTA—BRICK—TILE—IRON.

Design of Doors: ONE PANEL—TWO PANELS.

Approximate Weight Doors.....Lbs.

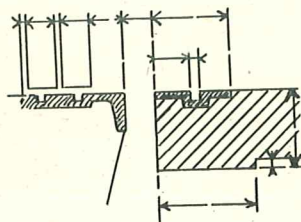
State if Panel Swings.....



Show any Pipe
or Obstructions at "B".

Two Speed Doors.

These Doors Close to Right—State if Opp. Hand (Close to Left).



Section Through Sill and Car Floor.

**Do NOT use this sheet in ordering.
Send for Measurement Sheet—Form 4**

DETAILS REQUIRED FOR RELIANCE-GRANT CONTROLLER

Width of Stiles Shaft Side 44" or 54" from Floor Section on this Line.....

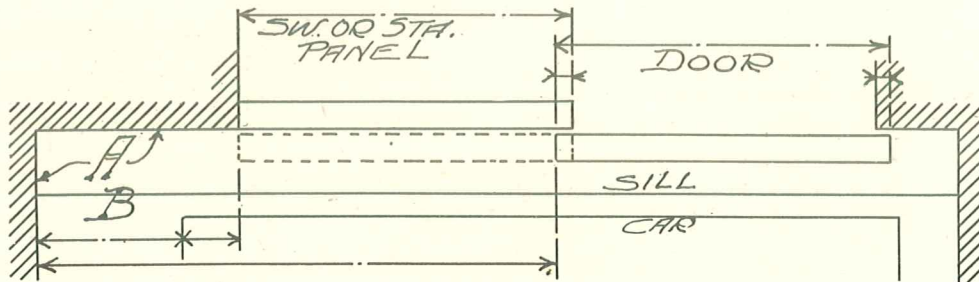
Doors made of: WOOD—KALAMEIN—IRON—HOL. METAL.

Material at "A": WOOD—CONCRETE—TERRA COTTA—BRICK—TILE—IRON.

Design of Doors: ONE PANEL—TWO PANELS.

Approximate Weight Doors.....Lbs.

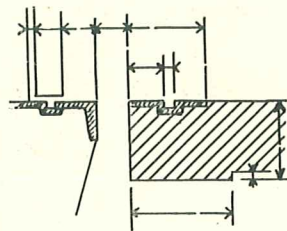
State if Panel Swings.....



Show any Pipe or Obstructions at "B".

Single Sliding Door.

These Doors Close to Right—State if Opp. Hand (Close to Left).



Section Through Sill and Car Floor.

Do NOT use this sheet in ordering.
Send for measurement sheet—Form 5

PARTS

No. 102	Steel rack $\frac{1}{2}$ " x $\frac{1}{2}$ "	\$1.25
No. 103	" " $\frac{1}{2}$ " x $\frac{5}{8}$ "	1.50
No. 104	Composition gear wheels 15 teeth	1.75
No. 105	" " " 18 "	1.75
No. 106	" " " 21 " $\frac{5}{8}$ hub	1.75
No. 107	" " " 21 " $\frac{13}{16}$ " hub	1.75
No. 108	Steel balls $\frac{1}{2}$ "	.10
No. 109	Special $\frac{1}{2}$ " Hexagon nuts	.05
No. 110	Ball retainer "D"—give length, width and thickness of center track	1.00
No. 111	Ball retainer "C"—give width of door	1.00
No. 112	Hanger bolts $4\frac{1}{2}$ " x $\frac{1}{2}$ "	.60
No. 113	" " $4\frac{1}{2}$ " x $\frac{1}{2}$ "	.60
No. 114	Bar lock Keeper	1.00
No. 115	" " Brackets	1.20
No. 116	" " Springs	1.15
No. 117	" " Catch	1.15
No. 118	" " Tube—per foot or fraction	.45
No. 119	" " Washers (rubber)	.15
No. 120	" " Screw collar	.35
No. 121	Gravity lock, Regular Keeper	.85
No. 122	" " Small "	.85
No. 123	" " Push bar	.60
No. 124	" " Latch	1.00
No. 125	" " Cross rod for No. 3— per foot or fraction	.45
No. 126	" " Cross rod bracket No. 3	1.20
No. 127	No. 97 lock, Plate and box	3.05
No. 128	" " " Handle lever	1.35
No. 129	" " " Top connection	1.65
No. 130	" " " Keeper	1.00
No. 131	" " " Catch	1.20

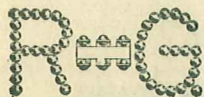
BUMPERS

No. 132	Special Reliance, Frame and rubber	.65
No. 133	Rubber—only	.45





ULYSSES GRANT McQUEEN
President



Telephone:
Vanderbilt 799

Graham & Norton Co.
126 Eleventh Ave.
N. Y.
Reliance-Grant Elevator Equipment Corp.

101 Park Avenue, New York City.

H. L. BALCH
Sec'y & Treas.

Price List No. 21

"RELIANCE" HANGERS

Typographical and clerical errors subject to correction.

All agreements made contingent upon strikes, fires, accidents or causes beyond our control.

All orders and contracts subject to our approval if taken by Agent.

No devices accepted for credit, as all goods are made to order.

All claims for shortage, must be made within 5 days from receipt of goods.

No price, guaranteed for over 30 days.

Price on Hangers, does not include Guides, Stops, or any other material for installation.

Price on Pivoting Device, does not include Hinges for Panel, or Flush Bolts for Bottom of Doors.

Price on Locks, includes Key for one opening, each shaft. For more, an extra charge will be made.

Terms are invariably F.O.B. New York. Net 30 days.

Goods amounting to \$10.00 or over are delivered free of charge in Greater New York.

2/26/1923
NEW YORK, September 1st, 1921.

EU%

PAGES REFERRED TO ARE 1920 CATALOGUE.

STYLE "G"

(See page 5)

Doors up to 26" wide.....	\$ 8.00
26" " 32" "	9.50
32" " 38" "	11.00
38" " 44" "	12.50

STYLE "GG"

(See page 6)

Doors up to 26" wide.....	\$10.00
26" " 32" "	11.50
32" " 38" "	13.00
38" " 44" "	14.50
44" " 50" "	16.00

PIVOTING DEVICE

(See page 9)

For Single Doors

Up to 38" wide.....	\$3.50
38" " 44" "	4.00
44" " 50" "	4.50

For Double Speed Doors

Up to 38" wide.....	\$7.00
38" " 44" "	8.00
44" " 50" "	9.00

STYLES "C" "CA" "D" "DA"

(See page 9)

Single Doors up to 200 lbs.

Doors up to 32" wide.....	\$13.25
32" " 38" "	14.90
38" " 44" "	16.55
44" " 50" "	18.20
50" " 56" "	19.85
56" " 62" "	21.50

Single Doors 400 to 600 lbs.

Doors up to 3' 2" wide.....	\$21.50
3' 2" " 3' 8" "	23.50
3' 8" " 4' 2" "	25.50
4' 2" " 4' 8" "	27.50
4' 8" " 5' 2" "	29.50
5' 2" " 5' 8" "	31.50
5' 8" " 6' 2" "	33.50
6' 2" " 6' 8" "	35.50
6' 8" " 7' 2" "	37.50
7' 2" " 7' 8" "	40.00
7' 8" " 8' 2" "	42.50
8' 2" " 8' 8" "	45.00
8' 8" " 9' 2" "	47.50
9' 2" " 9' 8" "	50.00
9' 8" " 10' 2" "	53.00

Single Doors 200 to 400 lbs.

Doors up to 32" wide.....	\$15.00
32" " 38" "	16.50
38" " 44" "	18.00
44" " 50" "	19.50
50" " 56" "	21.00
56" " 62" "	22.50

DOUBLE GEAR HANGERS "H" "HA" "I" "J"

(See page 10)

For Center Closing Doors

Doors up to 200 lbs. each

Width, each door, up to 20".....	\$34.00
" " " 20" " 26".....	37.75
" " " 26" " 32".....	41.50
" " " 32" " 38".....	45.25

Doors 200 to 400 lbs. each

Width, each door, up to 26".....	\$41.50
" " " 26" " 32".....	45.25
" " " 32" " 38".....	49.00
" " " 38" " 44".....	52.75

DOUBLE SPEED HANGERS "L" "LA" "K" "KA" "KB"

(See Page 15)

Doors up to 150 lbs. each

Width, each door, up to 20".....	\$49.50
" " " 20" " 26".....	53.00
" " " 26" " 32".....	56.50
" " " 32" " 38".....	60.00
" " " 38" " 44".....	63.50

Doors 150 to 300 lbs. each

Width, each door, up to 26".....	\$56.50
" " " 26" " 32".....	60.00
" " " 32" " 38".....	63.50
" " " 38" " 44".....	67.00
" " " 44" " 50".....	70.25

DOUBLE SPEED HANGERS WITHOUT RACK AND GEAR

Light Weight

Width, each door, up to 20".....	\$33.25
" " " 20" " 26".....	36.50
" " " 26" " 32".....	39.75
" " " 32" " 38".....	43.00
" " " 38" " 44".....	46.25

Heavy Weight

Width, each door, up to 26".....	\$39.75
" " " 26" " 32".....	43.00
" " " 32" " 38".....	46.25
" " " 38" " 44".....	49.50
" " " 44" " 50".....	52.75

DOUBLE SPEED HANGER "U"

SINGLE HANGER "R" "A" CURVED

(See Page 17)

THREE SPEED HANGER "M"

(See Page 16)

(PRICES ON APPLICATION)

FOLDING GATE HANGER "T"

(See Page 22)

Each leaf up to 15".....	\$51.50
Same—no Rack and Gear.....	40.00
Each leaf up to 18".....	56.00
Same—no Rack and Gear.....	45.00

GARAGE HANGER "W"

(See Page 19)

Width, of center door, up to 4' 8".....	\$45.00
" " " " 4' 8" " 5' 2".....	47.50
" " " " 5' 2" " 5' 8".....	50.50
" " " " 5' 8" " 6' 2".....	55.75
" " " " 6' 2" " 6' 8".....	61.25
" " " " 6' 8" " 7' 2".....	66.50
Special Garage Hinges—Per set of Six.....	45.00

BAR LOCK "A"

(See Page 24)

Black Oxydized or Statuary Bronze.....	\$8.00
ALL BRASS. Dull or Bright Finish.....	9.50
Extra Clamp and Key.....	.65

RELIANCE No. 97 LOCK

(See Page 24)

Black Oxydized or Statuary Bronze.... \$8.00

No. 101 LOCK

(See Page 26)

Black Oxydized or Statuary Bronze.... \$9.00

GRAVITY LOCK No. 1 and 2

(See Page 25)

Black Oxydized ONLY..... \$4.00

GRAVITY LOCK No. 3

(See Page 25)

Black Oxydized ONLY..... \$5.00

Extra Keys and Escutcheon Plates.....15 cents each

Cup Escutcheon with Gravity Locks with Push Button Elevator Doors

(See Page 25)

No. 1 \$2.00

No. 2 \$4.00

"RELIANCE-GRANT" HORIZONTAL DOOR LOCK

Dull Black Finish—With Polished and Plated Handle.

(See Page 23)

For Single Doors, not over 32" wide.....	}	\$16.00
For Center Closing Doors, each not over 32" wide.....		
For Combination Slide and Swing, Door not over 32" wide.....		20.00
For Two-Speed Doors, attaching to both doors, each door not over 26" wide.....		20.00
For Two-Speed Doors, as above, where they also swing into hall.....		25.00

Prices are for Standard Lock, and do not include any
special brackets, for rear connections.

FOR WIDER DOORS—PRICES ON APPLICATION.

DRAWER SLIDES

(See Page 21)

Drawers up to 20" in depth.....	\$3.75
20" " 26" " "	4.25
26" " 32" " "	4.75
32" " 38" " "	5.25
38" " 44" " "	5.75